

REMARKS

Status

This Amendment is responsive to the Office Action dated December 10, 2007, in which Claims 1-17 were rejected. Claims 1 and 15-17 have been amended. Accordingly, Claims 1-17 are pending in the application, and are presented for reconsideration and allowance.

Claim Rejection - 35 USC 103

Claims 1-11 stand rejected under 35 USC 103 as being unpatentable over US Patent No. 6,951,536 to Yokoi, with US Patent No. 6,240,312 to Alfano and in view of WO 01/99703 to Nemeth (which corresponds to US 20020016719 A1). This rejection is respectfully traversed.

Yokoi only discusses a capsule type camera, which is in the domain of hardware system, for capturing images in a human when it is swallowed.

Alfano also discusses a capsule type camera for capturing images in a human when it is swallowed. Alfano discusses (col. 6, lines 21-35) incorporating a spectroscopic system, which uses optical filters, in device 11 to select different wavelengths to improve image quality. Alfano does not discuss how disease is diagnosed, let alone the technique of using image processing algorithms (intelligent software) to automatically detect diseases.

Nemeth is directed to distributing data to a third party based on configurable distribution parameters. The system includes a wireless device that can relay the data and, particularly, the data is sent when the amount of data in a memory "exceeds a predetermined threshold". The medical data is limited to data about the "physical condition and composition of the patient", such as particularly blood sugar, blood pressure, and pulse rate. This data can be reviewed using the predetermined conditions to determine if an alert is warranted. The conditions include "readings outside of a predetermined range by being either too large or too small or if the rate of change of the readings exceeds a predetermined threshold" or the conditions can be based on "non-compliance alerts" such as when the patient did not take a "glucose reading at noon or administering an insulin shot at 1 p.m."

Nemeth does not teach (in numeral 58, page 22, lines 20-28) automatically detecting diseases in generalized R and G image color space.

Nemeth also does not teach (in numeral 70; page 27, lines 30-32; page 28, line 1-16) executing one or more diagnosing tasks corresponding to the automatic notification by examining in vivo images captured in a finite temporal range around the alarm signaling time.

In contrast, claim 1 calls for "automatically detecting one or more abnormalities in the generalized R and G image color space" (present application, page 12, lines 21-31, page 13, lines 1-17) and the prior art does not teach or suggest such. Further, claim 1 recites "routing the automatic notification including information on in vivo camera travel distance in GI tract to remote recipient(s)" (present application, page 7, lines 14-16, page 17, lines 7-14); neither Yokoi and Alfano nor Nemeth do not teach finding camera travel distance in a GI tract. In addition, claim 1 calls for "executing one or more diagnosing tasks corresponding to the automatic notification by examining in vivo images captured in a finite temporal range around the alarming singling time"(present application, page 2, lines 17-19). None of Yokoi, Alfano or Nemeth teach or suggest such. Withdrawal of the rejection of claim 1 for these reasons is requested.

Further, claim 1 calls for detecting abnormalities "in one or more of the in vivo images in the examination bundlette". Nemeth says nothing about analyzing images but discusses patient condition data. Applying the range analysis of Nemeth to the images of Yokoi or Alfano could be for the purpose of filtering for "improving the sensitivity of disease diagnosis" noted in Alfano. However, we just do not know because the prior art does not say anything about this. There is no teaching or suggestion about analyzing images. The Examiner is using hindsight in reading into the prior art that which is not there. It is further submitted that the combination of Nemeth with Alfano tends to teach away from the claim 1 by being directed at improving sensitivity. Withdrawal of the rejection for these additional reasons is requested.

The dependent claims 2-11 depend from the above-discussed independent claims and are patentable over the prior art for the reasons discussed above. The dependent claims also recite additional features not taught or suggested by the prior art. For example, claim 11 calls for applying image

processing algorithms and Alfano processes the images using spectroscopic hardware. It is submitted that the dependent claims are independently patentable over the prior art.

Claims 12-15 stand rejected under 35 USC 103 as being unpatentable over US Patent No. 6,951,536 to Yokoi, with US Patent No. 6,240,312 to Alfano with WO 01/99703 to Nemeth and in view of US Patent 5,836,872 to Kenet. This rejection is respectfully traversed. Claims 12-15 depend from claim 1 and are patentable over the prior art for the reasons discussed above. Kenet, in particular adds nothing to the features of the invention discussed above.

Claim 16 stands rejected under 35 USC 103 as being unpatentable over US Patent No. 6,951,536 to Yokoi with WO 01/99703 to Nemeth. This rejection is respectfully traversed for the reasons discussed below. Claim 17 stands rejected under 35 USC 103 as being unpatentable over US Patent No. 6,951,536 to Yokoi with WO 01/99703 to Nemeth and in further view of Li, US Patent 6,470,092. This rejection is respectfully traversed for the reasons discussed below.


Claims 16 and 17 emphasize "automatically detecting an abnormality in a generalized image color space in real-time in the in vivo images" and "signaling an alarm with information on in vivo camera travel distance in GI tract in real-time when the abnormality is detected". As discussed above, Yokoi and Nemeth do not teach or suggest such. Li adds nothing to Yokoi and Nemeth with respect to these features.

Summary

Should the Examiner consider that additional amendments are necessary to place the application in condition for allowance, the favor is requested of a telephone call to the undersigned counsel for the purpose of discussing such amendments.

For the reasons set forth above, it is believed that the application is in condition for allowance. Accordingly, reconsideration and favorable action are respectfully solicited.

Respectfully submitted,


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